

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1,7-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The added negative limitation of "only" is not supported in the specification. Any negative limitation or exclusionary proviso must have basis in the original disclosure. If alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. See *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977) ("[the] specification, having described the whole, necessarily described the part remaining."). See also *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), aff 'd mem., 738 F.2d 453 (Fed. Cir. 1984). The mere absence of a positive recitation is not basis for an exclusion. Any claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Note that a lack of literal basis in the specification for a negative limitation may not be sufficient to establish a *prima facie* case for lack of descriptive support. *Ex parte Parks*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter.

1993). See MPEP § 2163 - § 2163.07(b) for a discussion of the written description requirement of 35 U.S.C. 112, first paragraph.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1,7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole et al. (2003/0101645A1) in view of JP11-56118 (on form PTO-1449, herein JP118,) Knablein et al. (4291494), and Lai (5983562).**

For claim 1, Cole et al. teach an apparatus for producing seedlings comprising: a closed-type structure (20) surrounded by light-interceptive thermally insulating walls (11-13); multi-staged seedling culture shelves (30) provided with a plurality of shelf boards (31) capable of mounting grafted seedlings (G) thereon, said seedling culture shelves being disposed within said closed-type structure; a plurality of artificial lighting devices (35) capable of projecting light onto the grafted seedlings and a plurality of fans (107,109) capable of generating air stream over each of said seedling culture shelves; an air conditioning unit (112) capable of controlling the temperature and the humidity within said closed-type structure; a carbon dioxide gas supply unit (36,38, see [0055]) capable of supplying carbon dioxide gas into said closed-type structure.

However, Cole et al. are silent about said a respective artificial lighting device of said plurality of artificial lighting devices and a respective fan of said plurality of fans

being installed on each of said seedling culture shelves; and a light-transmitting shield detachably disposed to cover the grafted seedlings mounted on each of said plurality shelf boards of said seedling culture shelves, wherein said light-transmitting shield includes a plurality of vent holes; wherein the plurality of vent holes of said light-transmitting shield are provided with means of varying an open area of the vent hole thereof; wherein said light-transmitting shield includes two side faces that are parallel to a direction of a flow of the air stream, wherein said two side faces are opposing and non-adjacent side faces of said light-transmitting shield, and wherein said plurality of vent holes are formed in said two side faces of said light-transmitting shield to generate a static pressure from the flow of the air stream, such that said plurality of vent holes are formed in the opposing and non-adjacent side faces of said light-transmitting shield, and such that the static pressure provides a gas exchange between an inner space of the closed-type structure and an inner space of said light-transmitting shield.

JP118 teaches an apparatus for producing seedlings comprising an artificial lighting device (29) and fans (32) being installed on a each seedling culture shelf (23,27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to install an artificial lighting device and a fan on each shelf as taught by JP118 directly on the seedling culture shelves of Cole et al. in order to provide more direct and concentrate light and air ventilation to each of the plants on each shelf.

Knablein et al. teach an apparatus for producing seedlings comprising a light-transmitting shield (12) detachably disposed to cover the grafted seedlings mounted on shelf boards/containers, said light-transmitting shield being provided with a plurality of

vent holes (39); wherein the plurality of vent holes of said light-transmitting shield are provided with means (50) of varying an open area of the vent hole thereof; and wherein said light-transmitting shield includes two side faces (30-34) that are parallel to a direction of a flow of the air stream (depending on air flow patterns because the air flow into vent can be of various directions), wherein said two side faces are opposing and non-adjacent side faces of said light-transmitting shield, and wherein said plurality of vent holes are formed in said side faces (top side faces 30) of said light-transmitting shield to generate a static pressure from the flow of the air stream, such that the static pressure provides a gas exchange between an inner space of the closed-type structure and an inner space of said light-transmitting shield (inherently taught in Knablein et al. because air flow will circulate within the interior of the shield). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a light-transmitting shield with vent holes on side faces and means of varying the rate of hole area as taught by Knablein et al. over the seedlings mounted on the shelf boards of Coles et al. in order to protect the seedlings therein and in order to control the air flow rate entering the interior thereof.

Lai teaches a light-transmitting shield (22,26) having a plurality of vent holes (222) are formed in the opposing and non-adjacent side faces of said light-transmitting shield. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a plurality of vent holes on various side faces as further taught by Lai of the shield of Coles et al. as modified by JP118 and Knablein et al., in order to prevent molding by providing more ventilation.

The combination of Cole et al. as modified by JP11-56118, Knablein et al., and Lai is silent about the vent holes being formed only in said two side faces of the shield. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the vent holes formed only in two side faces of the shield of Cole et al. as modified by JP11-56118, Knablein et al., and Lai, depending on how much ventilation the user wishes to have for the structure.

For claim 7, Coles et al. as modified by JP118, Knablein et al. and Lai are silent about wherein the apparatus includes a plurality of said light-transmitting shields, each of said plurality of said light-transmitting shields being mounted on a respective shelf board of said plurality of shelf boards. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a plurality of said light-transmitting shields, each of said plurality of said light-transmitting shields being mounted on a respective shelf board of said plurality of shelf boards in the apparatus of Coles et al. as modified by JP118, Knablein et al. and Lai, since it is has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

For claim 8, Coles et al. as modified by JP118, Knablein et al. and Lai teaches wherein said light-transmitting shield includes five sides (of Knablein et al.), wherein said five sides of said light-transmitting shield includes (i) a top side, (ii) said two side faces that are opposing and non-adjacent side faces having the plurality of vent holes (of Lai modified to Knablein et al. for more ventilation holes) formed therein, and (iii) two additional opposing and non-adjacent sides, wherein, when said light-transmitting shield

is disposed to cover the grafted seedlings, said top side is located above the grafted seedlings, wherein, when said light-transmitting shield is disposed to cover the grafted seedlings, said two side faces are located at sides of the grafted seedlings, and wherein, when said light-transmitting shield is disposed to cover the grafted seedlings, said two additional opposing and non-adjacent sides are located at sides of the grafted seedlings, and wherein none of said two side faces of said light-transmitting shield having the plurality of vent holes formed therein are located at said top side of said light-transmitting shield.

For claim 9, Coles et al. as modified by JP118, Knablein et al. and Lai is silent about wherein the direction of the flow of the air stream is such that (i) the air stream flows along said two side faces of said light-transmitting shield, and (ii) the air stream flows perpendicular to said two additional opposing an non-adjacent sides. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have direction of the flow of the air stream is such that (i) the air stream flows along said two side faces of said light-transmitting shield, and (ii) the air stream flows perpendicular to said two additional opposing an non-adjacent sides in the apparatus of Coles et al. as modified by JP118, Knablein et al. and Lai, depending on how the air is injected or traveled to the sides. Note that the sides are merely flat surfaces, thus, any direction of air would flow along the side faces, and any air stream flows would be perpendicular to the sides depending on the user's injection of the air into the shield's interior. In addition, as stated by Applicant in paragraph [0044] of 2007/0089359, as long as the holes exist in the side faces, the air stream will flow in parallel to the side

faces. This phenomenon occurs in the combination of Coles et al. as modified by JP118, Knablein et al. and Lai because vent holes (as taught by Lai) will be in side faces of the shield (as taught by Knablein), thus, will generate by the air stream flowing in parallel to the side faces.

For claim 10, Coles et al. as modified by JP118, Knablein et al. and Lai teach a plurality of openings varying a size of the open area to adjust a hole area rate between 0% and 100% by rotating the vent cover. However, Coles et al. as modified by JP118, Knablein et al. and Lai are silent about wherein each means for varying the open area of each of said plurality of vent holes includes guide frames fixed on an outer face of said light transmitting shield in a longitudinal direction; and a hole area adjusting plate slidably held by said guide frames and including a plurality of openings varying a size of the open area to adjust a hole area rate between 0% and 100% by slidably moving said hole area adjusting plate along said guide frames in the longitudinal direction. It would have been an obvious substitution of functional equivalent to substitute the rotating vent system of Coles et al. as modified by JP118, Knablein et al. and Lai with means for varying the open area of each of said plurality of vent holes includes guide frames fixed on an outer face of said light transmitting shield in a longitudinal direction, since a simple substitution of one known element for another would obtain predictable results. KSR International Co. v. Teleflex Inc., 127 S. Ct. 1727, 1739, 1740, 82 USPQ2d 1385, 1395, 1396 (2007). Both types of venting system would allow the user to adjust the amount of air entering/exiting between 0% and 100% in the structure.

Response to Arguments

5. Applicant's arguments filed 8/24/2010 have been fully considered but they are not persuasive.

Applicant argued that Lai requires vent holes 222 and 262 to be formed on all sides of a transparent box 22 and a transparent hood 26, respectively (see Fig. 1 and col. 2, lines 41-54). Thus, in view of the above, it is clear that Lai requires the vent holes to be located on all sides of the box/hood, but fails to disclose or suggest that the plurality of vent holes are formed in the two side faces of the light-transmitting shield, such that the plurality of vent holes are formed only in the opposing and non-adjacent side faces of the light-transmitting shield, as recited in claim 1.

As stated in the 112 1st rejection above, Applicant failed to have support for the negative limitation of only in the two side faces. In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the vent holes formed only in two side faces of the shield of Cole et al. as modified by JP11-56118, Knablein et al., and Lai, depending on how much ventilation the user wishes to have for the structure.

Applicant argued that Knablein requires vent holes to be located on a side of a light transmitting shield (see Fig. 1), which also fails to disclose or suggest that the plurality of vent holes are formed only in the two side faces of the light-transmitting shield, such that the plurality of vent holes are formed only in the opposing and non-adjacent side faces of the light-transmitting shield, as recited in claim 1.

As stated in the 112 1st rejection above, Applicant failed to have support for the negative limitation of only in the two side faces. In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the vent holes formed only in two side faces of the shield of Cole et al. as modified by JP11-56118, Knablein et al., and Lai, depending on how much ventilation the user wishes to have for the structure. Furthermore, Knablein was not relied on for the vent holes being on the side faces. Knablein was relied on for the means for varying the rate of air flow through the holes into the structure for ventilation.

Applicant argued that new claim 10 recites that each means for varying the open area of each of the plurality of vent holes includes (i) guide frames fixed on an outer face of the light transmitting shield in a longitudinal direction, and (ii) a hole area adjusting plate slidably held by the guide frames and including a plurality of openings varying a size of the open area to adjust a hole area rate between 0% and 100% by slidably moving the hole area adjusting plate along the guide frames in the longitudinal direction. Knablein teaches that vent holes are opened and closed by rotating a vent cover (see Fig. 1), but fails to disclose or suggest that each of the plurality of vent holes includes (i) guide frames fixed on an outer face of the light transmitting shield in a longitudinal direction, and (ii) a hole area adjusting plate slidably held by the guide frames and including a plurality of openings varying a size of the open area to adjust a hole area rate between 0% and 100% by slidably moving the hole area adjusting plate along the guide frames in the longitudinal direction, as required by claim 10.

As stated in the above rejection, Coles et al. as modified by JP118, Knablein et al. and Lai teach a plurality of openings varying a size of the open area to adjust a hole area rate between 0% and 100% by rotating the vent cover. However, Coles et al. as modified by JP118, Knablein et al. and Lai are silent about wherein each means for varying the open area of each of said plurality of vent holes includes guide frames fixed on an outer face of said light transmitting shield in a longitudinal direction; and a hole area adjusting plate slidably held by said guide frames and including a plurality of openings varying a size of the open area to adjust a hole area rate between 0% and 100% by slidably moving said hole area adjusting plate along said guide frames in the longitudinal direction. It would have been an obvious substitution of functional equivalent to substitute the rotating vent system of Coles et al. as modified by JP118, Knablein et al. and Lai with means for varying the open area of each of said plurality of vent holes includes guide frames fixed on an outer face of said light transmitting shield in a longitudinal direction, since a simple substitution of one known element for another would obtain predictable results. KSR International Co. v. Teleflex Inc., 127 S. Ct. 1727, 1739, 1740, 82 USPQ2d 1385, 1395, 1396 (2007). Both types of venting system would allow the user to adjust the amount of air entering/exiting between 0% and 100% in the structure.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Nguyen whose telephone number is 571-272-6889. The examiner can normally be reached on Mon-Thu from 10:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Son T. Nguyen/
Primary Examiner, Art Unit 3643